

Title (en)  
Inverter with incorporated filter circuit and improved component cooling arrangement

Title (de)  
Wechselrichter mit eingebauter Filterschaltung und verbesserter Bauteilkühleinrichtung

Title (fr)  
Onduleur avec filtre incorporé et dispositif de refroidissement des composants amélioré

Publication  
**EP 0854565 A2 19980722 (EN)**

Application  
**EP 98300388 A 19980120**

Priority  
• JP 751397 A 19970120  
• JP 1099197 A 19970124

Abstract (en)  
An inverter includes a rectifier circuit (12), an inverter circuit (15), a filter circuit (19) including an input side capacitor (24), a coil (25a; 25b; 25c), and an output side capacitor (26), the filter circuit (19) being disposed at a front stage of the rectifier circuit (12), a casing (36) accommodating the inverter circuit (15), the rectifier circuit (12) and the filter circuit (19), a first cooling chamber (65) defined in the casing (36), a second cooling chamber (66) defined in the casing (36) and partitioned by a partition wall (64) from the first cooling chamber (65) so as to be adjacent to it, a plurality of vent holes (67, 68) formed in the partition wall (64), and a fan (39) for supplying a cooling air into the first cooling chamber (65) and further via the vent holes (67, 68) into the second cooling chamber (66). The inverter circuit (15) is cooled by the cooling air flowing into the first cooling chamber (65) and the coil (25a; 25b; 25c) of the filter circuit (19) is cooled by the cooling air flowing through the second cooling chamber (66).

IPC 1-7  
**H02M 7/48**

IPC 8 full level  
**H02M 7/00** (2006.01)

CPC (source: EP KR US)  
**H01F 17/062** (2013.01 - EP); **H02M 1/0064** (2021.05 - KR); **H02M 1/42** (2013.01 - KR); **H02M 7/003** (2013.01 - EP KR US);  
**H05K 7/20909** (2013.01 - EP KR US)

Cited by  
EP2006986A1; EP1309075A3; EP2020739A3; EP4273895A1; GB2336254A; GB2336254B; EP2642131A3; US11013153B2; EP3518639A1;  
WO2004055965A1; US7345561B2; US7714686B2; US7817406B2

Designated contracting state (EPC)  
CH DE ES FR GB IT LI SE

DOCDB simple family (publication)  
**EP 0854565 A2 19980722**; **EP 0854565 A3 19990825**; **EP 0854565 B1 20040331**; CN 1063882 C 20010328; CN 1189005 A 19980729;  
DE 69822682 D1 20040506; DE 69822682 T2 20050714; ES 2217503 T3 20041101; KR 100332509 B1 20020813;  
KR 19980070603 A 19981026; TW 358261 B 19990511; US 5905647 A 19990518

DOCDB simple family (application)  
**EP 98300388 A 19980120**; CN 98104281 A 19980119; DE 69822682 T 19980120; ES 98300388 T 19980120; KR 19980001418 A 19980119;  
TW 87100382 A 19980113; US 158697 A 19971231